

HIGHWAY PERFORMANCE MONITORING SYSTEM

**A state and national data system
consisting primarily of:**

- Roadway inventory
- Traffic data
- Pavement data








The complete listing of data catalogs with all of the data items is available in the FHWA's HPMS Field Manual:

<http://www.fhwa.dot.gov/policyinformation/hpms/fieldmanual/>








A Public Road

- A public road is any road or street owned and maintained by a public authority and open to public travel. [23 U.S.C. 101(a)]
- ... must be ... passable by four-wheel standard passenger cars, and open to the general public for use without restrictive gates, prohibitive signs, or regulation ... [23 CFR 460.2(c)]

Functional Classification Conversion Table

Old FC Code		New FC Code
1, 11	 Interstate	1
12	 Other Freeways and Expressways	2
2, 14	 Other Principal Arterial	3
6,16	 Minor Arterial	4
7, 17	 Major Collector	5
8	 Minor Collector	6
9, 19	 Local	7

Functional Classification Conversion Table

Old FC Code		New FC Code
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8	 Minor Collector	6
9, 19	 Local	7

We are still seeking these items

Whatever traffic data you can provide

- **ADT (or AADT)**
- **Peak Hour Volume (or K-Factor)**
- **D-Factor**
- **Truck Percentages**
- **Forecast Traffic**

TRAFFIC DATA SOUGHT

									Traffic Data Sought																
Section Identification			Current Traffic Data						ADT (or AADT) by Vehicle Classification													Forecast Traffic			
			either of these		Month and Year of Traffic Count (MM/YYYY)	either of these																			
Street Name	From Location	To Location	ADT	AADT		Peak Hour Volume	K Factor		D Factor	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Future ADT (or AADT)	Year of Future ADT (or AADT)	

This is as requested in recent years

TRAFFIC DATA SOUGHT

Traffic Data Sought																								
Section Identification			Current Traffic Data						ADT (or AADT) by Vehicle Classification														Forecast Traffic	
			either of these		Month and Year of Traffic Count (MM/YYYY)	either of these																		
Street Name	From Location	To Location	ADT	AADT		Peak Hour Volume	K Factor		D Factor	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Future ADT (or AADT)	Year of Future ADT (or AADT)

It is rare to find traffic volumes broken out by the 13 FHWA vehicle classes. But provide this wherever it is available.

TRAFFIC DATA SOUGHT

Section Identification			Current Traffic Data						Forecast Traffic	
			either of these			either of these				
Street Name	From Location	To Location	ADT	AADT	Month and Year of Traffic Count (MM/YYYY)	Peak Hour Volume	K Factor	D Factor	Future ADT (or AADT)	Year of Future ADT (or AADT)

ADT

For two-way facilities, provide the bi-directional ADT.

For one-way roadways, provide the directional ADT.

AADT

AADT is the average daily traffic value that represents all days of the reporting year. AADT reflects application of day of week, seasonal, and axle correction factors. No other adjustment factors are necessary.

48-hour counts are preferred but shorter duration, such as 24-hour counts, are acceptable if these are the latest available. Lacking a recent count, the AADT may be estimated from a traffic flow diagram, or by other means.

ADT or AADT may be entered. It is not necessary to supply both.

TRAFFIC DATA SOUGHT

Section Identification			Current Traffic Data						Forecast Traffic	
			either of these			either of these				
Street Name	From Location	To Location	ADT	AADT	Month and Year of Traffic Count (MM/YYYY)	Peak Hour Volume	K Factor	D Factor	Future ADT (or AADT)	Year of Future ADT (or AADT)

**Month and Year of Traffic Count:
MM/YYYY**

Enter 'est' if the ADT or AADT is estimated and not count based

TRAFFIC DATA SOUGHT

Section Identification			Current Traffic Data						Forecast Traffic	
			either of these			either of these				
Street Name	From Location	To Location	ADT	AADT	Month and Year of Traffic Count (MM/YYYY)	Peak Hour Volume	K Factor	D Factor	Future ADT (or AADT)	Year of Future ADT (or AADT)

Peak Hour Volume = The 24-hour peak

K-Factor

K30 if it is available. This is not common.

Code the K-Factor to the nearest whole percent . Don't use decimals.

Either Peak Hour Volume or K-Factor may be entered.

It is not necessary to supply both of these.

TRAFFIC DATA SOUGHT

Section Identification			Current Traffic Data						Forecast Traffic	
			either of these			either of these				
Street Name	From Location	To Location	ADT	AADT	Month and Year of Traffic Count (MM/YYYY)	Peak Hour Volume	K Factor	D Factor	Future ADT (or AADT)	Year of Future ADT (or AADT)

D-Factor

The percent of the peak hour volume flowing in the peak direction.

This is normally 50-75% (100% for one-way facilities).

It cannot be less than 50% since it is defined by the peak direction.

TRAFFIC DATA SOUGHT

Section Identification			Current Traffic Data						Forecast Traffic	
			either of these			either of these				
Street Name	From Location	To Location	ADT	AADT	Month and Year of Traffic Count (MM/YYYY)	Peak Hour Volume	K Factor	D Factor	Future ADT (or AADT)	Year of Future ADT (or AADT)






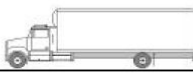











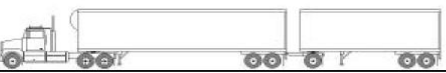

Future ADT (or AADT)

This is typically greater than the current traffic volume but not more than 4 times the current traffic volume. Please provide an explanation wherever if it is outside that range.

Year of Future ADT (or AADT)

Ideally, this would be 20 years hence. It should not be less than 18 years out but whatever model year is being predicted that is closest to the 20 year target will suffice.

Figure C-1 – FHWA Vehicle Classification Scheme

		Class	Illustration	Description
Passenger Vehicles		1		Motorcycles
		2		Passenger Cars
		3		Pickups/Vans
Single-Unit Trucks		4	 	Buses
		5	  	6 tire two-axle single unit trucks
		6	 	Three axle single unit trucks
		7	 	Four or more axle single unit trucks
Combination-Unit Trucks		8		Four or fewer axle truck and trailer combinations
		9		Five axle truck and trailer combinations
		10		Six or more axle truck and trailer combinations
		11		Five or fewer axle multis
		12		Six axle multis
		13		Seven or more axle multis
These are negligible		14		Errors/Unknown

State Highway Traffic Data

Traffic and Vehicle Data Systems Unit

<http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/index.htm>

Caltrans traffic counts are summarized annually into three reports:

- **Traffic Volumes**
- **Annual Average Daily Truck Traffic**
- **Ramp Volumes**

These may be downloaded from this site (PDF or Excel Files).

Pavement Data Sought

[illegible]

Pavement Data Sought

				Current Pavement Data														
Section Identification				Either of the two														
STREET_NAME	FROM	TO	Section Length (mi)	IRI	PCI	SURFACE TYPE	ROUTING	FAULTING	CRACKING_PER_CENT	CRACKING_LENGTH	YEAR_LAST_IMPROVEMENT	YEAR_LAST_CONSTRUCTION	LAST_OVERLAY_THICKNESS	THICKNESS_RIGID	THICKNESS_FLEXIBLE	BASE_TYPE	BASE_THICKNESS	
				X	X		X	X	X	X								

IRI and pavement distress data (rutting, faulting, cracking) is often not available from the cites and the counties.

Some locations, primarily the principal arterials, have had this information collected under contract.

Current Pavement Data

Section Identification				PCI	SURFACE TYPE	BASE_TYPE
STREET_NAME	FROM	TO	Section Length (mi)			

Pavement Condition Index (PCI), a composite index based on ASTM D6433 specifications, is used to assess maintenance and rehabilitation strategies. It should be reported wherever it has been measured and is available.

Though the state does not report PCI directly to the FHWA, there is a conversion to Present Serviceability Rating (PSR).

Current Pavement Data

Section Identification			Section Length (mi)	PCI	SURFACE TYPE	BASE_TYPE
STREET_NAME	FROM	TO				

SURFACE TYPE

Code	Description
1	Unpaved
2	Bituminous
3	JPCP – Jointed Plain Concrete Pavement
4	JRCP – Jointed Reinforced Concrete Pavement
5	CRCP – Continuously Reinforced Concrete Pavement
6	Asphalt-Concrete (AC) Overlay over Existing AC Pavement
7	AC Overlay over Existing Jointed Concrete Pavement
8	AC (Bituminous Overlay over Existing CRCP)
9	Unbonded Jointed Concrete Overlay on PCC Pavement
10	Bonded PCC Overlay on PCC Pavement
11	Other (includes “whitetopping”)

Current Pavement Data

Section Identification			Section Length (mi)	PCI	SURFACE TYPE	BASE_TYPE
STREET_NAME	FROM	TO				

BASE TYPE

Code	Description	Definition
1	No Base	Surface layer is placed directly on subgrade without a base
2	Aggregate	Non-stabilized granular, consisting of either crushed stone, gravel, recycled asphalt, or concrete
3	Asphalt or Cement Stabilized	Aggregate base treated with either asphalt or Portland cement
5	Hot Mix AC (Bituminous)	Either a new hot-mix asphalt (HMA) layer placed as the base layer or the HMA surface of an old flexible pavement
6	Lean Concrete	A Portland cement concrete mixture made with relatively low cement content (typically about 3 sacks/yd)
7	Stabilized Open-graded Permeable	Open-graded aggregate treated with either asphalt or Portland cement for stability
8	Fractured PCC	Rubberized or crack-and-sealed PCC pavement

Pavement History Data

Section Identification				Pavement History Data		
STREET_NAME	FROM	TO	Section Length (mi)	YEAR_LAST_IMPROVEMENT	YEAR_LAST_CONSTRUCTION	LAST_OVERLAY_THICKNESS

YEAR_LAST_IMPROVEMENT:

The year in which the roadway surface was last improved.

YEAR_LAST_CONSTRUCTION:

The year in which the roadway was constructed or reconstructed.

LAST_OVERLAY_THICKNESS:

Thickness of the most recent pavement overlay to the nearest 0.5 inch.

Elements of Structural Section

Section Identification				Elements of Structural Section		
STREET_NAME	FROM	TO	Section Length (mi)	THICKNESS RIGID	THICKNESS FLEXIBLE	BASE THICKNESS

THICKNESS_RIGID:

Thickness of rigid pavement to the nearest 0.5 inch.

THICKNESS_FLEXIBLE:

Thickness of flexible pavement to the nearest 0.5 inch.

BASE THICKNESS:

The thickness of the base pavement to the nearest inch.

The reports look good so far

Can you update them or replace
with a more recent data file?

If you have not yet turned in a data file, either for traffic
or pavement data, please consider placing one here:

<ftp://data.scag.ca.gov/>

This presentation is available at the HPMS website:

<http://www.dot.ca.gov/hq/tsip/hpms/index.php>

Past data submissions should still be available on SCAG's ftp site:

<ftp://data.scag.ca.gov/>